

Newborn Screening Quality Assurance Program
 Second-tier Maple Syrup Urine Disease and Phenylketonuria Quality Control Specimen Certification
 Set 2 – July 2016
Analysis Method: Derivatized – LC-MS/MS
Material Expiration Date: September 2017

ENRICHMENT LEVELS (endogenous levels not included)

<i>Lot ($\mu\text{mol/L}$ blood)</i>	<i>Alloisoleucine</i>	<i>Isoleucine</i>	<i>Leucine</i>	<i>Phenylalanine</i>	<i>Tyrosine</i>	<i>Valine</i>
A1613	0	0	0	0	0	0
B1613	100	100	100	100	100	100
C1613	200	200	200	200	200	200
D1613	400	400	400	400	400	400
E1613	800	800	800	800	800	800

ANALYTICAL INFORMATION

<i>Lot Numbers, Mean Values (\bar{x}), and 95% Confidence Limits (CL). Units are $\mu\text{mol/L}$ blood.</i>						
<i>Lot</i>	<i>Alloisoleucine</i>	<i>Isoleucine</i>	<i>Leucine</i>	<i>Phenylalanine</i>	<i>Tyrosine</i>	<i>Valine</i>
	<i>Mean/ 95% CL</i>	<i>Mean/ 95% CL</i>	<i>Mean/ 95% CL</i>	<i>Mean/ 95% CL</i>	<i>Mean/ 95% CL</i>	<i>Mean/ 95% CL</i>
A1613	$\bar{x} = 1.3$ CL = 0.3 – 2.4	$\bar{x} = 24.9$ CL = 15.0 – 34.7	$\bar{x} = 109.9$ CL = 94.9 – 125.0	$\bar{x} = 45.7$ CL = 39.5 – 51.9	$\bar{x} = 32.1$ CL = 26.9 – 37.4	$\bar{x} = 94.7$ CL = 82.1 – 107.3
B1613	$\bar{x} = 88.3$ CL = 60.3 – 116.3	$\bar{x} = 96.6$ CL = 71.9 – 121.3	$\bar{x} = 186.9$ CL = 160.1 – 213.8	$\bar{x} = 119.8$ CL = 106.7 – 132.9	$\bar{x} = 97.0$ CL = 84.2 – 109.8	$\bar{x} = 155.9$ CL = 136.3 – 175.5
C1613	$\bar{x} = 165.6$ CL = 131.3 – 199.9	$\bar{x} = 175.4$ CL = 129.4 – 221.3	$\bar{x} = 270.9$ CL = 236.5 – 305.3	$\bar{x} = 201.1$ CL = 171.3 – 231.0	$\bar{x} = 166.2$ CL = 139.6 – 192.7	$\bar{x} = 224.2$ CL = 181.8 – 266.5
D1613	$\bar{x} = 332.2$ CL = 254.0 – 410.4	$\bar{x} = 331.1$ CL = 262.9 – 399.3	$\bar{x} = 425.4$ CL = 357.6 – 493.2	$\bar{x} = 354.5$ CL = 297.6 – 411.4	$\bar{x} = 306.2$ CL = 229.4 – 383.1	$\bar{x} = 352.0$ CL = 284.4 – 419.6
E1613	$\bar{x} = 638.9$ CL = 475.6 – 802.3	$\bar{x} = 592.8$ CL = 461.5 – 724.1	$\bar{x} = 710.7$ CL = 617.0 – 804.3	$\bar{x} = 632.6$ CL = 553.0 – 712.2	$\bar{x} = 559.7$ CL = 457.3 – 662.2	$\bar{x} = 580.9$ CL = 475.2 – 686.7

Note: The values provided in the above tables are for reference use only. The mean value and confidence limits (CL) are determined by CDC for each Quality Control (QC) lot. Each participating laboratory must establish its own mean values and CL for its test method with these QC materials. Temporary estimates of mean values and CL can be determined after 10 successive, independent measurements. *Slazyk WE, Hannon WH. Quality Assurance in the newborn screening laboratory. In: Therrell BL Jr, editor. Laboratory methods for neonatal screening. Washington (DC): American Public Health Association, 1993:23-46.*